

THEORETICAL ASPECTS OF INNOVATION IN CRISIS MANAGEMENT

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Abstract. *In recent years, an increasing role is played by innovation in the operation of companies as well as there is a constant need for new scientific research studies on innovation in crisis management.*

The research aim of the paper is examine the theoretical aspects of innovation in crisis management.

The present research employed the following methods: analysis and synthesis, induction and deduction, document analysis and the monographic and graphic methods.

The research results showed that in crisis management, innovations are classified into two categories: crisis and developmental innovations. The key indication of a crisis innovation is a solution to the company's survival and economic process stabilisation. The purpose of a developmental innovation is to raise the competitiveness of a product or the whole company in the nearest future in order to avoid a projected and potential company crisis.

Innovations aimed at overcoming a crisis could be associated with various company management and activity areas, beginning with production and sales processes through to management and control mechanisms.

Keywords: *company, crisis, innovation, company crisis management.*

JEL code: *M10*

Introduction

Market conditions and economic situations determine certain behaviours of market actors, including companies or individual business entities that function in the common system. With the economic processes developing and the capacity being built up, companies are increasingly subject to the requirement to increase production and management efficiency, strengthen the competitiveness of their products, introduce the latest technologies and use the most effective production and management techniques. Innovation and innovative activity are one of the alternative solutions that can ensure that the requirement is met.

Modern researchers A.V.Khramova and N.V.Tsopa point out that innovative activity is one of the most effective instruments for raising the technical and technological level of companies (Храмова, Цопа, 2015), which is the basis for enhancing competitiveness under the modern economic circumstances.

In Latvia, a lot of attention is paid to the problem of innovation at national level. Innovation is a priority defined in the Guidelines for National Industrial Policy for 2014-2020 (Nacionālās industriālās..., 2013), in which the innovation and increasing the capacity of it are one of the pillars that will contribute to the enhancement of competitiveness of manufacturing industries and increases in productivity and exports in Latvia. The key goals and the most important activities of the national innovation policy of Latvia are set in the Guidelines for the Development of Science, Technology and Innovation for 2014-2020 (Zinātnes un tehnoloģijas..., 2013) that highlight the importance of innovation in the economy of Latvia and, therefore, the issue of innovation is broadly discussed in the scientific and specific literature. However, crisis management is a relatively new sub-kind of entrepreneurship management and, consequently, a number of its aspects (including innovation) are little researched not only in Latvia but also in other countries.

Based on the above-mentioned considerations, the research aim of the paper is examine the theoretical aspects of innovation in crisis management.

To achieve the research aim, the following specific research tasks have been set:

- 1) to characterise the key kinds and specifics of innovation in crisis management;
- 2) to examine the areas where to introduce innovations for the purpose of overcoming a company crisis.

Research hypothesis: to identify whether various directions of innovation development are possible to overcome a company crisis.

The present research employed the following methods: analysis and synthesis, induction and deduction, document analysis and the monographic and graphic methods.

The paper used theoretical findings by foreign scientists, reports of the European Union and Global Innovation Index reports, data provided by the Central Statistical Bureau of the Republic of Latvia and Internet resources.

Research results and discussion

The concept of company life cycle, which dates back to the 1960s, is employed by a number of theories that describe several development stages of a company. Although some recognised authors of company life cycle theories, e.g. I.Adizes (Adizes, 1988) and L.E.Greiner (Greiner, 1998), specify different numbers of company life cycle stages, they state unambiguously that the company life cycle stages are strongly sequential, where the end of one stage is the sequential and logical beginning of another one. Otherwise, the company either stagnates or is forced to end its economic activity.

The concept of company life cycle views a crisis as an unavoidable phenomenon for any company at any its life cycle stage. In the context of the concept of company life cycle, the period of transition from one stage to another could be regarded as a crisis situation in the company; a successful solution to it is the sequential beginning of a new stage or a shift to a new quality level in company management. Modern researchers such as A.Sakalas and R.Virbickaite often point out that a company crisis is “the unstable state of a company when usual business operations fail and the company’s performance curve goes down” (Sakalas, Virbickaite, 2011). A crisis is an extreme aggravation of contradictions in natural socio-economic processes in the system that endangers its viability and it is a complicated transitional state of the socio-economic system when foundations are laid to the restoration and further development of violations of economic rules (Сажина, 2015).

A precondition for overcoming a company crisis is the development of the company rather than economic growth. In his Economic Development Theory, J.A.Schumpeter considered and justified the semantic differences of two concepts: economic development and economic growth. J.A.Schumpeter asserted that economic growth represented an increase in the economic size of a system and processes that were sequential in time, while economic development was defined by him as a new kind of activity of the system, which was due to exploiting existing resources in a new combination. Such a new combination was called an innovation. J.A.Schumpeter introduced a new economic category in economic practice – innovations – that were also referred to as the main source of entrepreneurial profit which, in its turn, was key to development. “No development without entrepreneurial profit, and no development is possible without the latter (Шумпетер, 2008). Although J.A.Schumpeter’s theory focused on examining macro-level economic processes, it could be projected onto the economy of micro-level entities as well. According to findings by V.Z.Balikoev, economic growth involves quantitative changes in a system, while development – qualitative ones (Баликоев, 2014). Quantitative system changes in particular are often key to overcoming a company crisis successfully. Company crisis and crisis management researchers A.A.Belyaev and E.M.Korotkov have frequently emphasised that in modern economics, innovation has to be viewed as a necessary and most important element of crisis management (Беляев, Коротков, 2011), as the vulnerability of a company to a number of crisis factors, along with other aspects (scale and scope of company activity, the field of activity etc.), depends, as found by A.V.Zubkova, on the company’s innovative activity (Зубкова, 2010); besides, the innovative potential of the company is a prerequisite for avoiding or overcoming the crisis effectively (Шипович, 2011). Based on the above-mentioned researcher considerations

and findings, one can conclude that under the modern economic conditions, innovation is the basis for the development of a company and an element of an effective crisis management pillar.

In the modern world, there are a number definitions of the term innovation, which have emerged mainly because of diverse uses of innovation; however, all the definitions have one feature in common, as they refer to innovation as a process. A definition of innovation accepted in Latvia too explains that “innovation is a process, in which new scientific, technical, social, cultural or other ideas, products and technologies are embodied in a good or service that is demanded and competitive in the market” (Ekonomikas Ministrija, 2017). The Central Statistical Bureau of Latvia defines innovation as a “new or considerably enhanced product or process, new marketing techniques or new organisational techniques introduced in company practices, the organisation of a workplace or external relations” (Centrālā statistikas pārvalde, 2015). This means that the definitions of innovation stress one of the features that is important in the context of crisis management or the fact that an innovation has to be introduced – a new or enhanced product has to be on the market, as well as new processes, products, marketing and organisational techniques have to be actually used in company practices. Furthermore, such a novelty can be innovative only for a particular company because, in order for the novelty to be recognised an innovation, it is not mandatory for the company to be the first one that introduces the innovative product or process. It is important in the context of crisis management, as only an innovation introduced – a good or service that is demanded and competitive in the market – or actually used in company practices – results in efficient and rational use of the resources invested in innovative activities that are very constrained during any crisis and yields an expected effect in the crisis management process. In the context of crisis management, a full and complete innovation process is important to effectively overcome the crisis or reduce its negative consequences.

Innovation differs in field of activity, execution time and organisational and social effect. Any classification usually allows for overlap where the scope of one category partly coincides with that of another one (InnoSupportTransfer Rokasgrāmata..., 2005). For this reason, the scientific and specific literature provides diverse classifications of the kinds of innovation. According to a summary of classifications of innovation by researcher R.U.Muller (Мюллер, 2012), the kinds of innovation could be classified according to the following characteristics: significance, object, innovation degree, implementation place, developer, application field etc.

In Latvia, the kinds of innovation are divided according to a classification accepted by the Organisation for Economic Cooperation and

Development (OECD) (Guidelines for collecting ..., 2005), which distinguishes four most important kinds of innovation:

- **product innovation** (new or considerably enhanced goods or services, significant enhancements in technical specifications, components and materials, software, user-friendliness or other functional properties);
- **process innovation** (new or considerably enhanced production or supply techniques, significant changes in technologies, equipment and/or software);
- **marketing innovation** (new marketing techniques, including considerable changes not only in the design or packaging of products but also in the distribution and replacement of products or changes in price policies);
- **organisational innovation** (new organisational techniques in company entrepreneurship practices, the organisation of a workplace or external relations).

Such a classification is used by the Central Statistical Bureau of Latvia (Centrālā statistikas pārvalde, 2015). As pointed out by M.N.Kotsemir, A.S.Abroskin and D. Meissner in their research – an evolutionary discussion on the concepts and typology of innovation (Kotsemir et al., 2013) –, the OECD classification is often viewed as the key or classical kind of classification of innovation, particularly for the purpose of collection of statistical data.

Possibilities to overcome or avoid crisis situations depend on the innovative potential of a company.

Latvia is not currently ranked in top positions in the EU or globally with regard to the efficiency of innovative activity.

Every year the European Commission publishes an assessment of the innovation performance of every EU Member State, which is expressed as a ratio of the summary innovation index to the average EU-28 index of 2010. According to the European Commission, the innovation performance of Latvia in the period 2011-2016 was unsteady and much lower than the EU average. In 2016, Latvia scored 58.1, which was 43% lower than the EU-28 average. The innovation performance of Latvia was the lowest among the Baltic States as well (Figure 1).

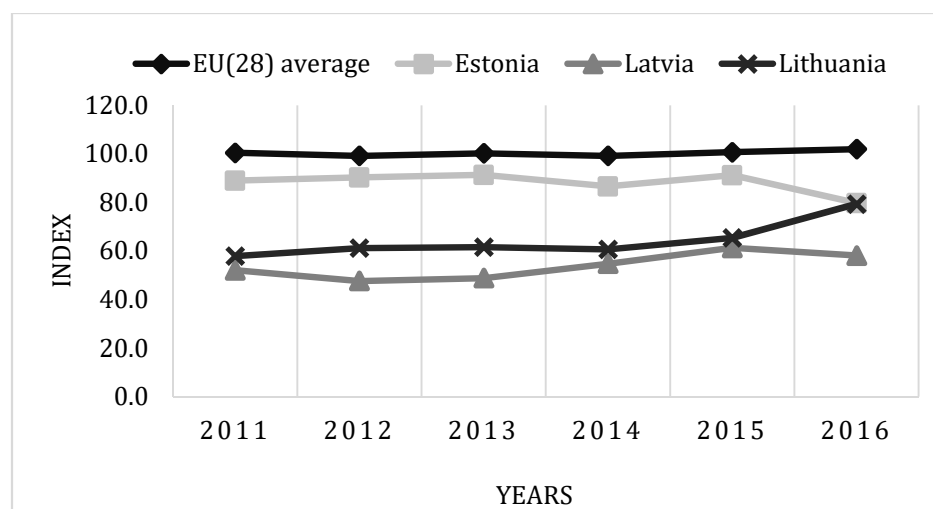


Fig.1 Innovation performance of the Baltic States and the EU average in 2011-2016 relative to that of the EU in the year 2010
(Source: compiled by the authors based on the *European Innovation...*, 2017)

In the 2016 report on the innovation performance of the European Union published by the European Commission (*European Innovation...*, 2017), Latvia was ranked as a moderate innovator. Latvia was placed in this group for the third consecutive year, while until 2013 it was at the top of the modest innovator group (*European Innovation...*, 2017).

However, in the 2017 Global Innovation index report published at the beginning of June 2017 that assessed the innovation performance of 127 economies, Latvia was ranked 33rd (*The Global Innovation...*, 2017). A comparison of rankings shows that Latvia was ranked six positions higher than Lithuania that was placed 40th, whereas Estonia with its 25th place was recognised as one of the most innovative countries in the world.

In Latvia, the key source of information on the innovative performance of companies is the results of regular surveys available in the database and reports of the Central Statistical Bureau (CSB). In accordance with the Cabinet Regulation of the Republic of Latvia "Regulations regarding the Official Statistical Programme 2017-2019" (*Noteikumi par oficiālās...*, 2016), a survey on innovative activity in entrepreneurship sector companies has to be conducted every two years and according to a single Eurostat methodology. At present, the CSB database provides statistical data on innovation in companies, which allows identifying the number of innovative companies and their proportion in the total active companies, as well as their distribution by field of activity, turnover, number of employees and kind of innovation and their expenditures on innovation (*Centrālā statistikas pārvalde*, 2015). It has to be noted that the available data are not broken by region, which hinders research on the innovative potential of companies in the regions of Latvia.

The statistical data on innovation in Latvia are collected in accordance with the Statistics Law of the Republic of Latvia, which provides that the data have to be collected once in two years. This negatively affects practices of research on innovative activity in Latvia because there is a lack of updated information.

If innovations are associated with the crisis management mechanism, crisis management theory classifies the innovations by purpose. Accordingly, as pointed out by a number of authors in their research and teaching aids, e.g. a group of authors: T.Averina, S.Barkalov, I.Surovcev and I.Nabiullin in their teaching aid entitled Innovation Management (Аверина, Баркалов, Суровцев, Набиуллин, 2010), a classification of the kinds of innovation by purpose gives an answer to a question regarding what an innovation is aimed at and whether the innovation (depending on the necessity) represents a solution to current (urgent) problems or achieving a future (strategic) goal. In the context of crisis management, there are two needs: to immediately overcome an economic crisis or any other crisis in the company and to avoid a potential and expected crisis situation. In crisis management, innovations are classified into two categories: 1) **crisis innovations** and 2) **developmental innovations**. The key indication of a crisis innovation is a solution to the company's survival and economic process stabilisation or, as pointed out by W.Gajda and V.Zaplatynskyi (Gajda, Zaplatynskyi, 2017), the restoration of a stable situation in the company. "After the transition into noncrisis mode of operation, the company can continue to innovate itself and move to the innovative type of development or entities continue to use innovations that have been introduced by crisis managers" (Gajda, Zaplatynskyi, 2017). The purpose of a developmental innovation is to raise the competitiveness of a product or the whole company in the nearest future in order to avoid a projected and potential company crisis. If effectively introducing developmental innovations in the company, it has to have a strong competitive advantage, which ensures that processes in the company run smoothly, without shocks (crises). Elements of the innovation process are planned depending on the need and the purpose of the innovation. According to W.Gajda and V.Zaplatynskyi, "innovation in crisis management has a slightly different purpose than innovation in the usual innovation management" (Gajda, Zaplatynskyi, 2017). The innovative potential of the company is assessed in a different way, as the resources of the company in a crisis situation are usually constrained, and the opportunities for exploitation of the resources considerably differ from those in a stable situation.

Prerequisites that contribute to the activation of innovative development or potential of a company for the purpose of increasing the

opportunities for coping with crisis phenomena, according to crisis management researchers A.V.Khramova and N.V.Tsopa, are as follows:

- effective governance of innovation processes;
- increase in the innovative activity of existing manufacturing companies, including individual facilities of the companies;
- stimulation of the development of innovative entrepreneurship and the establishment of an innovative infrastructure at national level;
- establishment of a system of activities aimed at strengthening and expanding the research and technological potential of the company;
- provision of qualified personnel for innovative activities.

This means that the most essential role in the crisis management process is played by innovative crisis management that is based on the application of innovative potential of the company. An innovative infrastructure, which encompasses the tangible, financial, creditworthiness, organisational and information elements of it, contributes to the expansion of innovative activity and the commercialisation of science- and technology-intensive products, thus assisting in tackling innovation policy problems in implementing crisis governance.

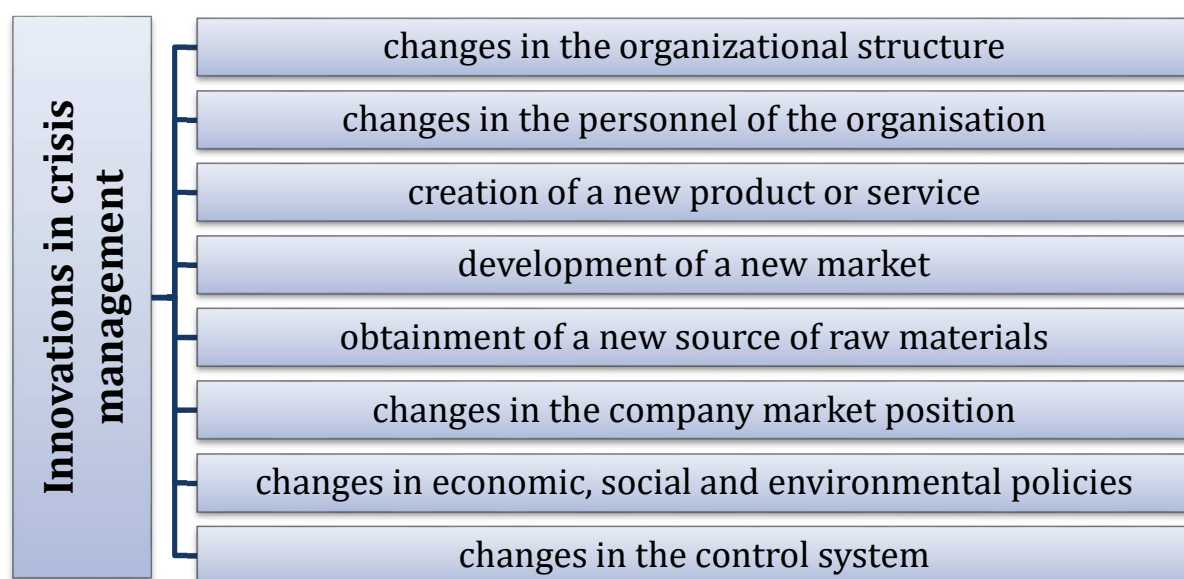


Fig.2 Potential directions of innovation development for the purpose of overcoming a company crisis

(Source: compiled by the authors based on Gajda, Zaplatynskyi, 2017)

Most authors who research innovation in the context of crisis management focus on the innovation as a means or instrument to be used to cope with a company crisis or avoid it. According to W.Gajda and

V.Zaplatynskyi (Gajda, Zaplatynskyi, 2017), innovation aimed at overcoming a crisis could be associated with various company management and activity areas, beginning with production and sales processes through to management and control mechanisms (Figure 2).

The issue of innovation in crisis management could be viewed from another perspective: the crisis management process itself could be based on innovative approaches or innovative instruments could be used in it as well. Such a methodological approach to researching innovation and crisis management has been often employed in the latest research studies. For example, innovative crisis management approaches and processes in construction have been researched by S.Sahin, S.Ulubeyli and A.Kazaza (Sahin, Ulubeyli, Kazaza, 2015). In their research, W.Gajda and V.Zaplatynskyi have examined the concept of innovation from the following aspects: 1) innovation as an instrument for enhancing crisis management activities and 2) innovation as the most effective tool for coping with the crisis. In general, crisis management is a relatively new science; therefore the scientific and specific literature most often and actively focus on the opportunities to use innovation particularly to overcome a crisis situation or avoid it, yet innovative crisis management and the introduction of innovations in the crisis management process in particular only start making modern scientists and practitioners interested in these fields, and at present the mentioned fields are little researched by both foreign and national researchers.

Conclusions and suggestions

1. In crisis management, innovations are classified into two categories: crisis and developmental innovations. The key indication of a crisis innovation is a solution to the company's survival and economic process stabilisation. The purpose of a developmental innovation is to raise the competitiveness of a product or the whole company in the nearest future in order to avoid a projected and potential company crisis.
2. Every year, the European Commission publishes an assessment of the innovation performance of every EU Member State, which is expressed as a ratio of the summary innovation index to the average EU-28 index of 2010. According to the European Commission, the innovation performance of Latvia in the period 2011-2016 was unsteady and much lower than the EU average. In 2016, Latvia scored 58.1, which was 43% lower than the EU-28 average. The innovation performance of Latvia was the lowest among the Baltic States as well.
3. The hypothesis put forward in the paper proved to be true, as there are various directions of innovation development for companies aimed at overcoming a crisis that could be associated with various company

management and activity areas, beginning with production and sales processes through to management and control mechanisms.

4. In the context of crisis management, it is important that any innovation developed by a company contributes to the efficient and rational use of the resources invested in innovative activities that are very constrained during any crisis and yields an expected effect in the crisis management process.

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